

WHAT IS CLAIMED IS:

Subj 45

1. A circuit breaker for an electrical circuit comprising:
an operating mechanism for interrupting current in the electrical circuit when operated;
an electronic trip unit including a microcomputer which monitors the current in the electrical circuit and generates a trip by automatically operating the operating mechanism to interrupt the current in the electrical current when the current exceeds a selectable value; and,
a rating plug having means establishing the selectable value of the current at which the electronic trip unit trips the operating mechanism, and a non-volatile memory, the rating plug further having means for storing frame rating and current rating of the circuit breaker in the non-volatile memory.

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2. The circuit breaker of claim 1 further including a first resistor for providing the microcomputer with the frame rating and a second resistor for providing the microcomputer with the current rating, wherein the means for storing the frame rating and the current rating of the circuit breaker includes leads connecting the first and second resistors to the non-volatile memory.

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3. The circuit breaker of claim 1 further comprising an internet connection extending from the microcomputer, wherein the current rating of the circuit breaker may be changed via the internet connection.

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4. The circuit breaker of claim 3 further comprising an error detection program within the microcomputer, wherein the error detection program rejects current rating ratings greater than the frame rating.

5. The circuit breaker of claim 1 further comprising a display for displaying the current rating.

6. A system for changing the rating plug information of a circuit breaker, the system comprising:

a circuit breaker having an electronic trip unit, a microcomputer in the electronic trip unit, and a rating plug having a non-volatile memory storing current rating and frame rating of the circuit breaker;

5 a first internet connection for connecting the circuit breaker to the world wide web;

a vendor sub-system; and,

10 a second internet connection for connecting the vendor sub-system to the world wide web;

15 wherein the vendor sub-system and the microcomputer are communicable via the first and second internet connections for altering current rating of the circuit breaker by sending new data from the vendor sub-system to the microcomputer and then to the non-volatile memory.

7. The system of claim 6 further comprising a display on the circuit breaker for displaying current rating information.

8. The system of claim 6 further comprising a billing system communicable with the vendor system for tracking changes made by the vending system.

20 9. The system of claim 6 further comprising an error detection program processable by the microcomputer for rejecting inappropriate current ratings.

10. The system of 6 further comprising a network intermediate the circuit breaker and the first internet connection.

11. A method of remotely altering rating plug information of a rating plug connected to an electronic trip unit of a circuit breaker, the method comprising:

providing a rating plug with a non-volatile memory;

5 directing a frame rating of the circuit breaker and a first current rating of the circuit breaker to the non-volatile memory;

initiating a current rating change from a vendor system;

sending a second current rating from the vendor system to the world wide web;

delivering the second current rating from the world wide web to the microcomputer;

10 storing the second current rating in the non-volatile memory; and,

replacing the first current rating with the second current rating.

12. The method of claim 11, subsequent delivering the second current rating from the world wide web to the microcomputer, further comprising comparing the second current rating to the frame rating and rejecting the second current rating if the second current rating exceeds the frame rating.

13. The method of claim 11 further comprising arranging a billing system in communication with the vendor system.

14. The method of claim 13 further comprising sending a notification from the microcomputer to the vendor system upon completion of receipt of the second current rating.

20 15. The method of claim 14 further comprising calculating a monetary charge for the sending the second current rating.

16. A plug-in digital rating plug for an electronic trip unit of a circuit breaker, the rating plug comprising:

a housing;

a connector for connecting the rating plug to the electronic trip unit; and,

5 a non-volatile memory storing current rating of the circuit breaker, wherein information regarding current rating is sent by the rating plug to the electronic trip unit in digital format only.

17. The rating plug of claim 16 further comprising a label attached to the housing for indicating the current rating.

10 18. The rating plug of claim 17 wherein the label includes a bar code.

19. The rating plug of claim 16 wherein the connector includes a plurality of connection pins.

20. The rating plug of claim 19 further comprising a plurality of leads connecting the plurality of connection pins to the non-volatile memory.

15 21. The rating plug of claim 16 wherein the housing is a plastic case.

22. The rating plug of claim 16 wherein the rating plug contains no resistors relating to current rating or frame rating of the circuit breaker.

*Sub 1
Sub 2
Sub 3
Sub 4*

23. A circuit breaker for an electrical circuit comprising:

an electronic trip unit including a microcomputer;

a removable digital rating plug having a non-volatile memory storing current rating of the circuit breaker;

5 a connector for connecting the rating plug to the electronic trip unit;

a connection lead extending within the connector directly connecting the electronic trip unit with the non-volatile memory;

wherein the current rating of the circuit breaker is determined exclusively by the non-volatile memory of the rating plug.

10 24. The circuit breaker of claim 23 wherein the rating plug includes a plastic housing.

25. The circuit breaker of claim 23 wherein the rating plug further comprises a label indicating the current rating.

26. The circuit breaker of claim 25 wherein the label includes a bar code.

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